CONTINUATION IN SUPPORT OF AN APPLICATION UNDER RULE 41 FOR A WARRANT TO SEARCH AND SEIZE

I, Andrew DeCoster, being first duly sworn, hereby depose and state as follows:

INTRODUCTION AND AGENT BACKGROUND

- 1. I make this affidavit in support of an application under Rule 41 of the Federal Rules of Criminal Procedure for a search warrant authorizing the examination of property—digital devices—which are currently in law enforcement possession (the "Devices"), as described in Attachment A, and the extraction from that property of electronically stored information as described in Attachment B.
- 2. I am a Special Agent with the Federal Bureau of Investigation. I have been in this position since 2018. I have training and experience in conducting investigations regarding financial crimes and statutes. As a federal agent, I am authorized to investigate violations of laws of the United States, and as a law enforcement officer I am authorized to execute warrants issued under the authority of the United States.
- 3. The facts in this affidavit come from my personal observations, my training and experience, and information obtained from other agents, witnesses, and agencies. This affidavit is intended to show merely that there is sufficient probable cause for the requested warrant. It does not set forth all of my knowledge, or the knowledge of others, about this matter.
- 4. Based on my training and experience and the facts as set forth in this affidavit, I respectfully submit that there is probable cause to believe that violations of 18 U.S.C. §§ 1344 (Bank Fraud) and 1028A (Aggravated Identity Theft) have been committed by **Richard Gomez**. There is also probable cause to search the "Devices," further described below and in Attachment A, for the things described in Attachment B.

<u>IDENTIFICATION OF THE DEVICE TO BE EXAMINED</u>

- 5. The property to be searched is a ZTE smartphone, Model Z839, S/N 320195604469; a 4GB red thumb drive; an Apple iPad, Model A2228, S/N DMPDCBQTPTRK; a black Lenovo ThinkPad laptop with a broken thumb drive; an Apple iPhone, IMEI: 351010392300871; a 500 GB Seagate Momentus Thin Hard Drive, S/N S0VAV8CD; a 250 GB Kingston hard drive, S/N SUV4000S37/240G; an Adata thumb drive; a 2GB Data Traveler thumb drive; a SanDisk Cruzer Glider 3.0 64 GB thumb drive, that is, the "Devices."
- 6. The "Devices" are currently located at the Federal Bureau of Investigation, Lansing Resident Agency, 2911 Eyde Parkway, Suite 200, East Lansing, MI 48823.

PROBABLE CAUSE

- 7. On or about November 18, 2022, Jackson National Life Insurance Company ("Jackson National"), a financial institution headquartered in Denver, Colorado, contacted law enforcement to report the fraudulent takeover of a customer account. In a subsequent interview, Jackson National employees at the Lansing, Michigan, office advised that on October 5, 2022, an unknown subject (UNSUB) used Jackson National's online portal feature to unlawfully obtain control over the existing account of customer Joseph Pluta. The portal allows customers to log in to their accounts remotely, and make changes including withdrawing funds. Pluta had not set up an online portal to his account himself, and was unaware that an UNSUB had created an online portal to his variable annuity policy in his name.
- 8. According to Jackson National's records, The UNSUB used IP address 174.134.6.75 to create the account portal. The contact information the UNSUB provided included the email address "joepluta1884@gmail.com", and phone numbers (661) 230-8004 and

(820) 203-5491 (for multi-factor authentication). Because that address and those phone numbers were not actually associated with Pluta, Pluta was not alerted that someone had created an online portal linked to his account.

- 9. On October 29, 2022, Jackson National received a physical withdrawal form in the mail, requesting a disbursement of \$91,765.89 from Pluta's account. On October 31, 2022, they received an online withdrawal request for another \$55,990.00 from the same account. Jackson National processed both requests, and mailed the two checks to 3118 Audubon Drive, Bakersfield, California. Bank records establish the \$55,990.00 check was deposited to US Bank account number 157533312698 through a US Bank ATM in Bakersfield. Jackson National was able to execute a stop payment request on the \$91,765.89 withdrawal before it was negotiated.
- 10. On or about January 6, 2023, I served a federal grand jury subpoena on T-Mobile for subscriber information relating to telephone number (820) 203-5491, used by the UNSUB to open the fraudulent online portal. T-Mobile identified the subscriber for that account as **Richard Gomez**, 1805 California Avenue, Apartment 4, Bakersfield, California. According to billing details provided by T-Mobile, **Gomez** provided a birthdate of January 19, 1983 and a social security number of 563-75-1350 when opening his phone account. According to the National Crime Information Center (NCIC), a law enforcement criminal records database, both the birthdate and social security number are associated with **Richard Gomez**.
- 11. On or about December 21, 2022, I served a federal grand jury subpoena on US

 Bank for information associated with account number 157533312698, the account into which the

 \$55,990.00 check was deposited. US Bank disclosed the primary applicant on the account was

"Joseph Pluta", with telephone number (661) 230-8004. The IP address used to open the account was 174.134.6.75, which resolved to Charter Communications Inc.

- 12. On or about January 6, 2023, I served a federal grand jury subpoena requesting Charter Communications Inc. provide subscriber information for the individual who had been assigned IP address 174.134.6.75 at the time US Bank account 157533312698 was created. Charter disclosed the subscriber was **Richard Gomez**, 3118 Audubon Drive, Bakersfield, California, phone number (820) 203-5491.
- 13. On October 17, 2022, the Kern County Sheriff's Office (KCSO)¹ executed a state search warrant at 3118 Audubon Drive, Bakersfield, California for evidence that **Richard Gomez** and an associate were illegally selling guns and narcotics from the residence. Among other items, KCSO deputies found mail addressed to **Richard Gomez** at that address. **Gomez** was on active Post Release Community Supervision with a state felony warrant for his arrest, but was not found at the scene.
- 14. On February 22, 2023, the Bakersfield Police Department (BPD) executed a state search warrant at 1805 California Avenue, Apartment 4, Bakersfield, California for **Richard Gomez**. Pursuant to the warrant, BPD officer seized documents showing **Gomez**' dominion over residence and electronic devices (the "Devices" described in this warrant application). BPD found **Gomez** at the residence, and placed him under arrest.
- 15. At the time of the warrant execution, BPD interviewed the property manager of 1805 California Avenue, Apartment 4, Bakersfield, California. The property manager advised Apartment 4 was rented by "Joseph Philip Pluta." As part of the normal rental application

¹ Bakersfield is located in Kern County, California.

process, the property manager took a photocopy of the applicant's state-issued driver's license card, which he showed to the interviewing officer. According to the BPD report, the driver's license card bore Joseph Philip Pluta's name, date of birth, and **Richard Gomez'** photograph. Joseph Philip Pluta was Joseph Pluta's son. According to the California Department of Motor Vehicles database, there was no record associated with the driver's license number.

- 16. In my training and experience, electronic devices like the cellular phones, computers, and digital storage media seized from **Richard Gomez** can be used to access online bank accounts, make fraudulent transactions, and store evidence of those crimes. They often contain contact information and evidence of communications with criminal associates in furtherance of the crimes. Cellular telephones also store location information that can establish the physical location of subjects at key times, for example, establishing that **Gomez** or an associate was near the US Bank ATM at the time the fraudulent check was deposited.
- 17. Subsequent to the execution of the state warrant, a BPD officer assigned to the FBI Task Force in Bakersfield sent the Devices to the Federal Bureau of Investigation for analysis. They were stored at the Patrick V. McNamara Federal Building, 477 Michigan Ave, Detroit, MI 48226, and subsequently sent to the Lansing Resident Agency, 2911 Eyde Parkway, Suite 200, East Lansing, MI 48823. While the Bakersfield Police Department might already have all necessary authority to examine the Devices for evidence of gun and drug trafficking, I am seeking this additional warrant to authorize the search and seizure of evidence relating to federal bank fraud and identity theft offenses.

TECHNICAL TERMS

- 18. Based on my training and experience, and information acquired from other law enforcement officials with technical expertise, I know the terms described below have the following meanings or characteristics:
- a. "Digital device," as used herein, includes the following three terms and their respective definitions:
- 1) A "computer" means an electronic, magnetic, optical, or other high speed data processing device performing logical or storage functions, and includes any data storage facility or communications facility directly related to or operating in conjunction with such device. *See* 18 U.S.C. § 1030(e)(1). Computers are physical units of equipment that perform information processing using a binary system to represent information. Computers include, but are not limited to, desktop and laptop computers, smartphones, tablets, smartwatches, and binary data processing units used in the operation of other products like automobiles.
- 2) "Digital storage media," as used herein, means any information storage device in which information is preserved in binary form and includes electrical, optical, and magnetic digital storage devices. Examples of digital storage media include, but are not limited to, compact disks, digital versatile disks ("DVDs"), USB flash drives, flash memory cards, and internal and external hard drives.
- 3) "Computer hardware" means all equipment that can receive, capture, collect, analyze, create, display, convert, store, conceal, or transmit electronic, magnetic, or similar computer impulses or data. Computer hardware includes any data-processing devices (including, but not limited to, central processing units, internal and peripheral storage devices

such as fixed disks, external hard drives, floppy disk drives and diskettes, and other memory storage devices); peripheral input/output devices (including, but not limited to, keyboards, printers, video display monitors, modems, routers, scanners, and related communications devices such as cables and connections), as well as any devices, mechanisms, or parts that can be used to restrict access to computer hardware (including, but not limited to, physical keys and locks).

- b. "Wireless telephone" (or mobile telephone, or cellular telephone), a type of digital device, is a handheld wireless device used for voice and data communication at least in part through radio signals and also often through "wi-fi" networks. When communicating via radio signals, these telephones send signals through networks of transmitters/receivers, enabling communication with other wireless telephones, traditional "land line" telephones, computers, and other digital devices. A wireless telephone usually contains a "call log," which records the telephone number, date, and time of calls made to and from the phone. In addition to enabling voice communications, wireless telephones offer a broad range of applications and capabilities. These include, variously: storing names and phone numbers in electronic "address books"; sending, receiving, and storing text messages, e-mail, and other forms of messaging; taking, sending, receiving, and storing still photographs and video; storing and playing back audio files; storing dates, appointments, and other information on personal calendars; utilizing global positioning system ("GPS") locating and tracking technology, and accessing and downloading information from the Internet.
- c. A "tablet" is a mobile computer, typically larger than a wireless phone yet smaller than a notebook, that is primarily operated by touch-screen. Like wireless phones, tablets function as wireless communication devices and can be used to access the Internet or

other wired or wireless devices through cellular networks, "wi-fi" networks, or otherwise.

Tablets typically contain programs called applications ("apps"), which, like programs on both wireless phones, as described above, and personal computers, perform many different functions and save data associated with those functions.

- d. "Computer passwords and data security devices" means information or items designed to restrict access to or hide computer software, documentation, or data. Data security devices may consist of hardware, software, or other programming code. A password (a string of alpha-numeric characters) usually operates as a digital key to "unlock" particular data security devices. Data security hardware may include encryption devices, chips, and circuit boards. Data security software of digital code may include programming code that creates "test" keys or "hot" keys, which perform certain pre-set security functions when touched. Data security software or code may also encrypt, compress, hide, or "booby-trap" protected data to make it inaccessible or unusable, as well as reverse the progress to restore it.
- f. "Computer software" means digital information which can be interpreted by a computer and any of its related components to direct the way they work. Computer software is stored in electronic, magnetic, or other digital form. It commonly includes programs to run operating systems, applications, and utilities.
- g. Internet Protocol ("IP") Address is a unique numeric address used by digital devices on the Internet. An IP address, for present purposes, looks like a series of four numbers, each in the range 0-255, separated by periods (*e.g.*, 149.101.1.32). Every computer attached to the Internet must be assigned an IP address so that Internet traffic sent from and directed to that computer may be directed properly from its source to its destination. Most

Internet service providers control a range of IP addresses. Some computers have static—that is, long-term—IP addresses, while other computers have dynamic—that is, frequently changed—IP addresses.

- h. The "Internet" is a global network of computers and other electronic devices that communicate with each other using numerous specified protocols. Due to the structure of the Internet, connections between devices on the Internet often cross state and international borders, even when the devices communicating with each other are in the same state.
- i. "Internet Service Providers," or "ISPs," are entities that provide individuals and businesses access to the Internet. ISPs provide a range of functions for their customers, including access to the Internet, web hosting, e-mail, remote storage, and co-location of computers and other communications equipment. ISPs can offer a range of options in providing access to the Internet, including via telephone-based dial-up and broadband access via digital subscriber line ("DSL"), cable, dedicated circuits, fiber-optic, or satellite. ISPs typically charge a fee based upon the type of connection and volume of data, called bandwidth, which the connection supports. Many ISPs assign each subscriber an account name, a user name or screen name, an e-mail address, an e-mail mailbox, and a personal password selected by the subscriber. By using a modem, the subscriber can establish communication with an ISP and access the Internet by using his or her account name and password.
- l. "Domain Name" means the common, easy-to-remember names associated with an IP address. For example, a domain name of "www.usdoj.gov" refers to the IP address of 149.101.1.32. Domain names are typically strings of alphanumeric characters, with each level

delimited by a period. Each level, read backwards – from right to left – further identifies parts of an organization. Examples of first-level, or top-level domains are typically .com for commercial organizations, .gov for the governmental organizations, .org for organizations, and .edu for educational organizations. Second-level names will further identify the organization, for example usdoj.gov further identifies the United States governmental agency to be the Department of Justice. Additional levels may exist as needed until each machine is uniquely identifiable. For example, www.usdoj.gov identifies the World Wide Web server located at the United States Department of Justice, which is part of the United States government.

- m. "Cache" means the text, image, and graphic files sent to and temporarily stored by a user's computer from a website accessed by the user in order to allow the user speedier access to and interaction with that website in the future.
- n. "Peer to Peer file sharing" (P2P) is a method of communication available to Internet users through the use of special software, which may be downloaded from the Internet. In general, P2P software allows a user to share files on a computer with other computer users running compatible P2P software. A user may obtain files by opening the P2P software on the user's computer and searching for files that are currently being shared on the network. A P2P file transfer is assisted by reference to the IP addresses of computers on the network: an IP address identifies the location of each P2P computer and makes it possible for data to be transferred between computers. One aspect of P2P file sharing is that multiple files may be downloaded at the same time. Another aspect of P2P file sharing is that, when downloading a file, portions of that file may come from multiple other users on the network to facilitate faster downloading.

- i. When a user wishes to share a file, the user adds the file to shared library files (either by downloading a file from another user or by copying any file into the shared directory), and the file's hash value is recorded by the P2P software.

 The hash value is independent of the file name; that is, any change in the name of the file will not change the hash value.
- ii. Third party software is available to identify the IP address of a P2P computer that is sending a file. Such software monitors and logs Internet and local network traffic.
- o. "VPN" means a virtual private network. A VPN extends a private network across public networks like the Internet. It enables a host computer to send and receive data across shared or public networks as if they were an integral part of a private network with all the functionality, security, and management policies of the private network. This is done by establishing a virtual point-to-point connection through the use of dedicated connections, encryption, or a combination of the two. The VPN connection across the Internet is technically a wide area network (WAN) link between the sites. From a user perspective, the extended network resources are accessed in the same way as resources available from a private network-hence the name "virtual private network." The communication between two VPN endpoints is encrypted and usually cannot be intercepted by law enforcement.
- p. "Encryption" is the process of encoding messages or information in such a way that eavesdroppers or hackers cannot read it, but authorized parties can. In an encryption scheme, the message or information, referred to as plaintext, is encrypted using an encryption algorithm, turning it into an unreadable ciphertext. This is usually done with the use of an

encryption key, which specifies how the message is to be encoded. Any unintended party that can see the ciphertext should not be able to determine anything about the original message. An authorized party, however, is able to decode the ciphertext using a decryption algorithm that usually requires a secret decryption key, to which adversaries do not have access.

19. In my training and experience, examining data stored on devices of this type can uncover, among other things, evidence that reveals or suggests who possessed or used the device, and sometimes by implication who did not, as well as evidence relating to the commission of the offense(s) under investigation.

COMPUTERS, ELECTRONIC/MAGNETIC STORAGE, AND FORENSIC ANALYSIS

- 20. As described above and in Attachment B, this application seeks permission to search for evidence, fruits, contraband, instrumentalities, and information that might be found within the Devices, in whatever form they are found. Based on my knowledge, training, and experience, as well as information related to me by agents and others involved in this investigation and in the forensic examination of digital devices, I respectfully submit that there is probable cause to believe that the records and information described in Attachment B will be stored in the Devices for at least the following reasons:
- a. Individuals who engage in criminal activity, including committing aggravated identity theft, use digital devices, like the Devices, to access websites to facilitate illegal activities, store documents and records relating to their illegal activity, maintain email correspondence, text or other "Short Message Service" ("SMS") messages, store stolen financial and personal identification data, including bank account numbers, credit card numbers, and

names, addresses, telephone numbers, and social security numbers of other individuals, and keep records of illegal transactions using stolen financial and personal identification data.

- b. Individuals who engage in the foregoing criminal activity, in the event that they change digital devices, will often "back up" or transfer files from their old digital devices to that of their new digital devices, so as not to lose data, including that described in the foregoing paragraph, which would be valuable in facilitating their criminal activity.
- c. Digital device files, or remnants of such files, can be recovered months or even many years after they have been downloaded onto the medium or device, deleted, or viewed via the Internet. Electronic files downloaded to a digital device can be stored for years at little or no cost. Even when such files have been deleted, they can be recovered months or years later using readily-available forensics tools. When a person "deletes" a file on a digital device such as a home computer, a smart phone, or a memory card, the data contained in the file does not actually disappear; rather, that data remains on the storage medium and within the device unless and until it is overwritten by new data. Therefore, deleted files, or remnants of deleted files, may reside in free space or slack space – that is, in space on the digital device that is not allocated to an active file or that is unused after a file has been allocated to a set block of storage space – for long periods of time before they are overwritten. In addition, a digital device's operating system may also keep a record of deleted data in a "swap" or "recovery" file. Similarly, files that have been viewed via the Internet are automatically downloaded into a temporary Internet directory or "cache." The browser typically maintains a fixed amount of electronic storage medium space devoted to these files, and the files are only overwritten as they are replaced with more recently viewed Internet pages. Thus, the ability to retrieve "residue" of

an electronic file from a digital device depends less on when the file was downloaded or viewed than on a particular user's operating system, storage capacity, and computer, smart phone, or other digital device habits.

- 21. As further described in Attachment B, this application seeks permission to locate not only electronic evidence or information that might serve as direct evidence of the crimes described in this affidavit, but also for forensic electronic evidence or information that establishes how the digital device(s) were used, the purpose of their use, who used them (or did not), and when. Based on my knowledge, training, and experience, as well as information related to me by agents and others involved in this investigation and in the forensic examination of digital devices, I respectfully submit there is probable cause to believe that this forensic electronic evidence and information will be in any of the Device(s) at issue here because:
- a. Although some of the records called for by this warrant might be found in the form of user-generated documents or records (such as word processing, picture, movie, or texting files), digital devices can contain other forms of electronic evidence as well. In particular, records of how a digital device has been used, what it has been used for, who has used it, and who has been responsible for creating or maintaining records, documents, programs, applications, and materials contained on the digital device(s) are, as described further in the attachments, called for by this warrant. Those records will not always be found in digital data that is neatly segregable from the hard drive, flash drive, memory card, or other electronic storage media image as a whole. Digital data stored in the Device(s), not currently associated with any file, can provide evidence of a file that was once on the storage medium but has since been deleted or edited, or of a deleted portion of a file (such as a paragraph that has been deleted

from a word processing file). Virtual memory paging systems can leave digital data on a hard drive that show what tasks and processes on a digital device were recently used. Web browsers, e-mail programs, and chat programs often store configuration data on a hard drive, flash drive, memory card, or memory chip that can reveal information such as online nicknames and passwords. Operating systems can record additional data, such as the attachment of peripherals, the attachment of USB flash storage devices, and the times a computer, smart phone, or other digital device was in use. Computer, smart phone, and other digital device file systems can record data about the dates files were created and the sequence in which they were created. This data can be evidence of a crime, indicate the identity of the user of the digital device, or point toward the existence of evidence in other locations. Recovery of this data requires specialized tools and a controlled laboratory environment, and also can require substantial time.

- b. Forensic evidence on a digital device can also indicate who has used or controlled the device. This "user attribution" evidence is analogous to the search for "indicia of occupancy" while executing a search warrant at a residence. For example, registry information, configuration files, user profiles, e-mail, e-mail address books, chats, instant messaging logs, photographs, the presence or absence of malware, and correspondence (and the data associated with the foregoing, such as file creation and last-accessed dates) may be evidence of who used or controlled the digital device at a relevant time, and potentially who did not.
- c. A person with appropriate familiarity with how a digital device works can, after examining this forensic evidence in its proper context, draw conclusions about how such digital devices were used, the purpose of their use, who used them, and when.

- d. The process of identifying the exact files, blocks, registry entries, logs, or other forms of forensic evidence on a digital device that are necessary to draw an accurate conclusion is a dynamic process. While it is possible to specify in advance the records to be sought, digital device evidence is not always data that can be merely reviewed by a review team and passed along to investigators. Whether data stored on digital devices is evidence may depend on other information stored on the devices and the application of knowledge about how the devices behave. Therefore, contextual information necessary to understand other evidence also falls within the scope of the warrant.
- e. Further, in finding evidence of how a digital device was used, the purpose of its use, who used it, and when, sometimes it is necessary to establish that a particular thing is not present on the device. For example, the presence or absence of counter-forensic programs, anti-virus programs (and associated data), and malware may be relevant to establishing the user's intent and the identity of the user.
- f. I know that when an individual uses a digital device to commit aggravated identity theft, the individual's device will generally serve both as an instrumentality for committing the crime, and also as a storage medium for evidence of the crime. The digital device is an instrumentality of the crime because it is used as a means of committing the criminal offense. The digital device is also likely to be a storage medium for evidence of crime. From my training and experience, I believe that a digital device used to commit a crime of this type may contain data that is evidence of how the digital device was used; data that was sent or received; notes as to how the criminal conduct was achieved; records of Internet discussions about the

crime; and other records that indicate the nature of the offense and the identities of those perpetrating it.

METHODS TO BE USED TO SEARCH DIGITAL DEVICES

- 22. Based on my knowledge, training, and experience, as well as information related to me by agents and others involved in this investigation and in the forensic examination of digital devices, I know that:
- a. Searching digital devices can be an extremely technical process, often requiring specific expertise, specialized equipment, and substantial amounts of time, in part because there are so many types of digital devices and software programs in use today. Digital devices whether, for example, desktop computers, mobile devices, or portable storage devices may be customized with a vast array of software applications, each generating a particular form of information or records and each often requiring unique forensic tools, techniques, and expertise. As a result, it may be necessary to consult with specially trained personnel who have specific expertise in the types of digital devices, operating systems, or software applications that are being searched, and to obtain specialized hardware and software solutions to meet the needs of a particular forensic analysis.
- b. Digital data is particularly vulnerable to inadvertent or intentional modification or destruction. Searching digital devices can require the use of precise, scientific procedures that are designed to maintain the integrity of digital data and to recover "hidden," erased, compressed, encrypted, or password-protected data. Recovery of "residue" of electronic files from digital devices also requires specialized tools and often substantial time. As a result, a

controlled environment, such as a law enforcement laboratory or similar facility, is often essential to conducting a complete and accurate analysis of data stored on digital devices.

- c. Further, as discussed above, evidence of how a digital device has been used, the purposes for which it has been used, and who has used it, may be reflected in the absence of particular data on a digital device. For example, to rebut a claim that the owner of a digital device was not responsible for a particular use because the device was being controlled remotely by malicious software, it may be necessary to show that malicious software that allows someone else to control the digital device remotely is not present on the digital device. Evidence of the absence of particular data or software on a digital device is not segregable from the digital device itself. Analysis of the digital device as a whole to demonstrate the absence of particular data or software requires specialized tools and a controlled laboratory environment, and can require substantial time.
- d. Digital device users can attempt to conceal data within digital devices through a number of methods, including the use of innocuous or misleading filenames and extensions. For example, files with the extension ".jpg" often are image files; however, a user can easily change the extension to ".txt" to conceal the image and make it appear as though the file contains text. Digital device users can also attempt to conceal data by using encryption, which means that a password or device, such as a "dongle" or "keycard," is necessary to decrypt the data into readable form. Digital device users may encode communications or files, including substituting innocuous terms for incriminating terms or deliberately misspelling words, thereby thwarting "keyword" search techniques and necessitating continuous modification of keyword terms. Moreover, certain file formats, like portable document format ("PDF"), do not lend

themselves to keyword searches. Some applications for computers, smart phones, and other digital devices, do not store data as searchable text; rather, the data is saved in a proprietary non-text format. Documents printed by a computer, even if the document was never saved to the hard drive, are recoverable by forensic examiners but not discoverable by keyword searches because the printed document is stored by the computer as a graphic image and not as text. In addition, digital device users can conceal data within another seemingly unrelated and innocuous file in a process called "steganography." For example, by using steganography, a digital device user can conceal text in an image file that cannot be viewed when the image file is opened. Digital devices may also contain "booby traps" that destroy or alter data if certain procedures are not scrupulously followed. A substantial amount of time is necessary to extract and sort through data that is concealed, encrypted, or subject to booby traps, to determine whether it is evidence, contraband, or instrumentalities of a crime.

e. Analyzing the contents of mobile devices, including tablets, can be very labor intensive and also requires special technical skills, equipment, and software. The large, and ever increasing, number and variety of available mobile device applications generate unique forms of data, in different formats, and user information, all of which present formidable and sometimes novel forensic challenges to investigators that cannot be anticipated before examination of the device. Additionally, most smart phones and other mobile devices require passwords for access. For example, even older iPhone 4 models, running IOS 7, deployed a type of sophisticated encryption known as "AES-256 encryption" to secure and encrypt the operating system and application data, which could only be bypassed with a numeric passcode. Newer cell phones employ equally sophisticated encryption along with alpha-numeric passcodes, rendering

most smart phones inaccessible without highly sophisticated forensic tools and techniques, or assistance from the phone manufacturer. Mobile devices used by individuals engaged in criminal activity are often further protected and encrypted by one or more third party applications, of which there are many. For example, one such mobile application, "Hide It Pro," disguises itself as an audio application, allows users to hide pictures and documents, and offers the same sophisticated AES-256 encryption for all data stored within the database in the mobile device.

- f. Based on all of the foregoing, I respectfully submit that searching any digital device for the information, records, or evidence pursuant to this warrant may require a wide array of electronic data analysis techniques and may take weeks or months to complete. Any pre-defined search protocol would only inevitably result in over- or under-inclusive searches, and misdirected time and effort, as forensic examiners encounter technological and user-created challenges, content, and software applications that cannot be anticipated in advance of the forensic examination of the devices. In light of these difficulties, your affiant requests permission to use whatever data analysis techniques reasonably appear to be necessary to locate and retrieve digital information, records, or evidence within the scope of this warrant.
- 23. In searching for information, records, or evidence, further described in Attachment B, law enforcement personnel executing this search warrant will employ the following procedures:
- a. The digital devices, and/or any digital images thereof created by law enforcement, sometimes with the aid of a technical expert, in an appropriate setting, in aid of the examination and review, will be examined and reviewed in order to extract and seize the information, records, or evidence described in Attachment B.

- b. The analysis of the contents of the digital devices may entail any or all of various forensic techniques as circumstances warrant. Such techniques may include, but shall not be limited to, surveying various file "directories" and the individual files they contain (analogous to looking at the outside of a file cabinet for the markings it contains and opening a drawer believed to contain pertinent files); conducting a file-by-file review by "opening," reviewing, or reading the images or first few "pages" of such files in order to determine their precise contents; "scanning" storage areas to discover and possibly recover recently deleted data; scanning storage areas for deliberately hidden files; and performing electronic "keyword" searches through all electronic storage areas to determine whether occurrences of language contained in such storage areas exist that are related to the subject matter of the investigation.
- c. In searching the digital devices, the forensic examiners may examine as much of the contents of the digital devices as deemed necessary to make a determination as to whether the contents fall within the items to be seized as set forth in Attachment B. In addition, the forensic examiners may search for and attempt to recover "deleted," "hidden," or encrypted data to determine whether the contents fall within the items to be seized as described in Attachment B. Any search techniques or protocols used in searching the contents of the Device(s) will be specifically chosen to identify the specific items to be seized under this warrant.

AUTHORIZATION TO SEARCH AT ANY TIME OF THE DAY OR NIGHT

14. Because forensic examiners will be conducting their search of the digital devices in a law enforcement setting over a potentially prolonged period of time, I respectfully submit

that good cause has been shown, and therefore request authority, to conduct the search at any time of the day or night.

CONCLUSION

15. I submit that this affidavit supports probable cause for a warrant to search the Devices described in Attachment A and to seize the items described in Attachment B.